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## PATENT ABSTRACTS OF JAPAN

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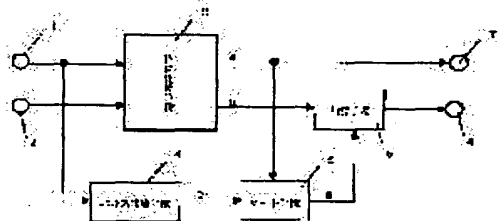
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## (54) PHASE COMPARATOR

## (57)Abstract:

PROBLEM TO BE SOLVED: To enable a phase comparator to prevent the occurrence of dead zones which are mainly generated by the operational delay of a charge pump in a digital PLL circuit.

SOLUTION: A phase comparator is constituted of a pulse generating means 4 which outputs a prescribed pulse width by inputting one of the two outputs inputted to a phase comparing means 3, a gate means 5 which inputs the signal from the pulse generating means 4 by using one phase error Pu of the two phase errors outputted from a phase comparing means 3, and an adding means 6 which ANDs the other phase error Pd of the phase comparing means 3 and the output of the gate means. The comparator outputs the phase error Pu and the two outputs of the adding means 6 to a charge pump.



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